FIRST STEPS TOWARDS EUGENIC REFORM¹

By Major Leonard Darwin

THE primary object of Eugenics is, no doubt, to substitute for the slow and cruel methods of nature some more rational, humane. and rapid system of selection by which to ensure the continued progress of the race. Such being the case, should not the first steps towards Eugenic reform be to decide whom it is that an all-wise government would prohibit from figuring amongst the parents of the rising generations, whom it would encourage to marry, and what ought to be the powers placed in the hands of the administrators of our own government, who can hardly at any time be described as being all-wise, to enable them to act in the direction thus indicated as being advisable in ideal circumstances? It may be that we have not yet sufficient knowledge to enable us to give a definite answer to these questions; but if Eugenists have not been as explicit as circumstances permit with regard to those primary points, they are certainly deserving of some censure.

In discussing these difficult problems, it is well to begin by clearly admitting that no reform is without some attendant evils, and that, in deciding how far any reform should be pushed, we have to attempt to ascertain the point at which the accompanying evils would outweigh the advantages which, it is held, would undoubtedly be felt in its initial stages. Here then we are attempting to weigh in the balance a number of problematical effects, effects which vary with every variation in the social condition of the country where the reform is to be introduced. It is therefore quite out of the question to hope to be able to lay down simple rules enabling us to recognise the limits beyond

¹ N.B.—Being part of a lecture delivered in February, 1912, before the Cambridge University Eugenics Society.

which it would be unwise to push the proposed reforms. All that can be done is to indicate in outline the broad principles which should guide us in such matters.

In considering in what cases it would be wise to prevent individuals from reproducing their kind we may therefore logically begin by admitting in the most explicit manner that every impediment, moral or legal, which is artificially created with the view of preventing marriages from taking place, produces Marriage is natural. definite and serious evil consequences. Marriage makes for happiness. Bars to marriage encourage immorality. In fact in attempting to forecast the advantages and disadvantages likely to result from the reforms he advocates the Eugenist must always attach great weight to the immediate harm likely to spring from any check on marriage. Moreover, it should also be freely admitted that our knowledge of the laws of heredity is as yet far from perfect-indeed further scientific investigation on this subject may perhaps be described as the first step now to be taken towards Eugenic reform. The possibility of inflicting a serious hardship on any individual, without any corresponding benefit in reality resulting from it to posterity, must, therefore, always be held in view. Here then we have the strong arguments in favour of great caution in introducing any changes in the laws or customs affecting marriage.

It will, however, hardly be denied by anyone that there are certain cases in which marriages should be absolutely prohibited; as, for example, the marriage of two idiots. All will admit that a line must be drawn somewhere, and some attempt to say where it should be drawn must, therefore, be made. Does nature give us any help in solving this problem? None whatever; for she never forbids the banns of marriage, and her method of drawing the line is to kill off all who unaided are incapable of fighting the battle of life, a method which can no longer be tolerated. And yet we feel that nature cannot have been wholly blundering during all these ages in thus preventing the unfit from reproducing their kind. Failing nature, are there any abstract considerations which may help us in searching for guidance? Granted that we could grade or classify mankind according to some list of qualities that we wish to perpetuate, then no doubt

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any couple who were thus placed below the average of the whole probably would, by producing children below that average, tend to lower the national average in the future. But in truth we get no guidance from this truism: for further consideration makes it evident that the smaller the number of individuals selected to become the parents of the coming generation, the higher might be their average qualities, and the more rapid apparently might be the progress of the race. "I breeds a great many, and I kills a great many," said a breeder of dogs in giving a brief but lucid account of his successes as a prize-winner. Then why not adopt this same successful method in dealing with mankind? Why not, the scoffer against Eugenics will ask, combine compulsory marriage with wholesale murder? To this we reply that, although we do not doubt the possibility of making rapid progress by such means, yet we fully realise both the impossibility and the immorality of attempting to introduce the methods of the stud farm into human affairs. Certain objections to such proceedings in regard to their immediate effects have already been noticed. But, even if we look to future generations only, there is need for caution. In considering the possibility of placing some check on the marriage of the less fit, it must be admitted that such a reform is likely to be first adopted amongst the most advanced races of mankind, and, moreover, that it would tend to produce a certain diminution in their numbers in comparison, that is, with the population which would have existed had no such reforms been introduced. Such a differential check on the population of the higher races is therefore open to objection, not only on obvious political grounds, but also because of its probable Eugenic effects. The rate of the growth of our population has in recent years been diminishing, and the possible effect of Eugenic reform on the numerical strength of the nation does, therefore, appear to place a certain limitation to the lengths to which even an all-wise government ought to proceed in checking marriages.

There are certain considerations, however, which ought to lessen our fear of any reduction of population consequent on eugenic reform. In the first place we must take into consideration the effects of the less competent throwing a burden on the shoulders of their more competent neighbours, which they do in several ways, no doubt involuntarily. Many of the incompetent escape taxation partially or altogether, and what they fail to pay must be made up by increasing the imposts falling on the competent. Then, again, since the day's wage is the price which the labourer gets for selling his day's work, and since that price depends in large measure on the average value of that day's work, it follows that, except in piece-work pure and simple, the competent workman is generally underpaid and the incompetent workman overpaid for the work done. Thus, if the numbers of the incompetent were diminished, the average value of the day's work throughout the land would certainly rise, and not only would the burden of taxation be diminished, for the reasons above suggested, but a general rise in the level of wages would also take place—a strong argument in itself in favour of Eugenic reform. But here the point is that any increase in wages or diminution in taxation would tend to produce an increase in the number of marriages, and therefore in the population, thus filling up the gaps which Eugenic reform would produce by diminishing the numbers of drunkards, invalids, criminals, and lunatics. How much effect would thus be produced is, however, doubtful in view of the unfortunate fact that families seem to become smaller as the scale of comfort rises.

An unquestionably valid reason for not attaching too much weight to any effect on the numerical strength of the nation resulting from drastic methods of artificial selection is, however, to be found in the fact that the resulting increase in average intelligence and physical strength would in most respects more than compensate for any diminution in the population thus caused. Certainly in commerce brains and character will command success in the competitive struggle between nations in circumstances where mere numbers would fail to avert defeat. And as regards that large class of persons who would be rejected by the recruiting sergeant, and who, by shirking work and becoming paupers, always throw a heavy but unperceived burden on the honest labourer, their entire removal would add greatly both to the safety and prosperity of the nation as a whole, whether we

look to peace or war. But it may be worth here noting that any reliance on greater strength and intelligence in order to make up for diminished numbers necessitates precautions being taken against any gaps in our ranks being filled up by the immigration of less desirable stocks from abroad. If we are really intent on maintaining and improving the character of our race, we must, in fact, view with considerable suspicion our traditional policy of allowing nearly all comers to land on our shores.

We thus see that, in deciding how far it is wise to push Eugenic reform with the object of checking the multiplication of the naturally unfit, we are dealing with a difficult balancing of advantages and disadvantages. On the one hand we have the necessity, as we hold it, of ensuring the progress of the race by discouraging the reproduction of inferior stocks. On the other hand must be reckoned the immediate harm resulting from any checks on marriage, including any diminution in the population—a harm only justifiably inflicted if the corresponding benefits can be predicted with considerable confidence. The possibility of reducing the total population by diminishing the average birth-rate among the undesirable classes would be less to be feared if the birth-rate in the well-to-do and the intellectual sections of the community were not so alarmingly low. In other words, if anything could be done to increase the rate of multiplication of the more desirable stocks, then it would be possible to introduce more drastic methods of breeding out the unfit without fear of unduly reducing the numerical strength of the nation. But, taking things as they are, it seems that the banns of marriage ought to be forbidden only in cases where the Eugenic objections to the proposed union are very Such a conclusion is unsatisfactory on account of its vagueness, though it is perhaps as far as we can go in the existing state of scientific knowledge.

The foregoing considerations, moreover, merely help us to form some sort of an idea of the proportion of the population which could, without ill-effects, be prevented from forming part of the ancestry of coming generations, whilst they give no indication as to which are to be held to be the most undesirable unions on Eugenic grounds. It has often been urged as an

objection to all Eugenic practice that, before taking any steps intended to affect the characteristics of the race in the future, Eugenists ought to decide on the ideal at which they are aiming, or on the exact type of man they wish to encourage, whereas on this point they, as a rule, are nearly silent. Unquestionably it is necessary to decide in a general way as to what qualities are held to be good and what to be bad, a subject in regard to which there is, however, not likely to be any wide differences of opinion. Moreover, it might perhaps be necessary to lay down as a general principle that marked excellence in any desirable quality ought to go very far towards outweighing any undesirable qualities; for in this way we should minimise the risk of any line of advance being, as it were, impeded by our reforms. This may be worth noting because, in connection with this question of the ideal type, the opponents of Eugenic reform have freely declared that its adoption in the past would have resulted in Ruskin, Carlyle, Stevenson, Keats, and many other unhealthy geniuses never having appeared on the face of the earth. But, in certain examinations, excellence in one subject is held to pass the candidate even if very defective in others; and if, as above suggested, this rule had been generally adopted as part of the Eugenic test, then probably few, if any, of the above mentioned geniuses would have been ruled out. True the retort may be made that the Eugenist would prevent if he could the appearance on earth of all individuals destined to be very unhealthy, and that in this way the appearance of all the abovementioned geniuses would have been unintentionally inhibited. But if our opponents credit us with the power of being able to foretell what marriages are likely to be followed by the appearance of very sickly children, may we not also be credited with at least some power of prophesying the appearance of rare ability, and therefore with being little disposed to forbid the banns when this would be likely to be the result of any marriage? Moreover, this attack on the eugenic method ought to be based on the unhealthiness, not of the geniuses themselves, but of their progenitors. Did these great men spring from very unsound stocks? If not, Eugenic reformers would not have sought to have interfered. No doubt it has been asserted that geniuses

have exceptionally bad health; but this, if true, may be wholly or partly due to the exceptional mental strain which is inevitable in the case of all men who leave a deep mark on the world's history. Exceptionally brilliant men, even if their health is in some instances eventually injured by mental strain, may therefore be as likely to appear in healthy as in unhealthy families, and it is at all events for those who believe that ability and heritable bad constitutions-not mere bad health-on the part of the individual himself are correlated, to prove their case by statistics, which they certainly have not done. Moreover, by breeding out certain strains of mental defect, such as feeble-mindedness, Eugenists hold that the result of their reforms would be to materially increase the number of geniuses annually being born. Finally, if as a parting shot on this question, our critics should say that anyhow Eugenists, if all powerful in the past, would to the detriment of the race have prevented many of these geniuses from marrying, we can, in addition to a mere denial of the charge, reply in a polemical spirit by asking whether the world would have been at all the worse if they had done so. Cowper, Lamb, Stevenson, Keats, Ruskin, Henley, Quincey, John Stuart Mill, Rousseau, Guy de Maupassant, Schumann, Nietzsche, Chopin, Rachel, Napoleon, Mahomed, St. Paul, Julius Cæsar, and Alexander the Great, form a list of the names which I have seen mentioned in connection with this argument—though why some of them are included I know not. Have our opponents, I wonder, ever considered how extraordinarily few descendants these great men have left behind them? Can they now point to the existence of one single descendant of all these geniuses? Whether we here find the basis of an argument in favour of Eugenic reform may indeed be doubtful; but anyhow this consideration does serve to complete the discomfiture of those who in attacking it rely on facts concerning men of exceptional ability.

But the truth is that for the immediate future we need trouble our heads but little with these somewhat abstract arguments concerning geniuses, because our main efforts as regards preventive legislation, at all events, should be directed towards the reduction of the output of unquestionably undesirable types.

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In the present state of our scientific knowledge it would be as well to begin by endeavouring to make it impossible for those who are not only characterised by some signal heritable defect but who are also below the average both in bodily and in mental qualities, to reproduce their kind. That there are many such persons in existence may perhaps be sufficiently proved by the following quotation from Professor Münsterberg's Psychology and Crime:

"When a school for criminal boys was carefully examined, it was found that of the two hundred boys, one hundred and twenty-seven were deficient in their general make-up, either in the direction of feeble-mindedness, or in the direction of hysteric emotion, or in the direction of epileptic disturbance. And fuller light is thrown on these figures as soon as others are added; in eighty-five cases the father or the mother, or both, were drunkards; in twenty-four cases, the parents were insane; in twenty-six cases, epileptics; and in twenty-six further cases, suffering from other nervous diseases" (p. 242). Again he tells us that comparisons made by psychological tests applied to female criminals in an American penitentiary and to female students at a University indicated that the criminals were markedly inferior in perception by touch, in the maintenance of energy in pulling, in memory, and in the rapidity of associating ideas. Now it is probably true, as Professor Münsterberg says, that an actual tendency to crime was not inherent in these criminals, but merely a lack of mental capacity and an insufficient power of resisting temptation. But when we find that a large class exists who are markedly inferior to the average of the nation if judged by many tests both mental and physical, who have proved at an early age their incapacity to resist temptation, and who will therefore inevitably become criminals under existing social conditions, surely we ought at once to take precautions to ensure that the worst of them at all events should not, as it were, infect the coming generation with their defects? Surely segregation for life with kindly treatment must in the interests of posterity be the fate of all who both fail in life in consequence of some signal heritable defect and have no redeeming qualities to compensate for such a defect.

In order to carry out any such reform effectually it is obviously necessary first to devise some method of sorting out the naturally unfit. With this object in view, the first step to be taken ought to be to establish some system by which all children at school reported by their instructors to be specially stupid, all juvenile offenders awaiting trial, all ins-and-outs at workhouses. and all convicted prisoners should be examined by trained experts in mental defects in order to place on a register the names of all those thus ascertained to be definitely abnormal. In this examination both physical and psychological tests should if possible be included, in which case the reports thus obtained would afford a good foundation for selecting out the most unfit. From the Eugenic standpoint this method would no doubt be insufficient, for the defects of relatives are only second in importance to the defects of the individuals themselves-indeed, in some cases they are of far greater importance. Hence it is to be hoped that in the more enlightened future, a system will also be established for the examination of the family history of all those placed on the register as being unquestionably mentally abnormal, especially as regards the criminality, insanity, illhealth and pauperism of their relatives, and not omitting to note cases of marked ability. If all this were done it can hardly be doubted that many strains would be discovered which no one could deny ought to be made to die out in the interest of the nation; and in this way the necessity for legislation, such as that proposed by the Royal Commission on the care and control of the feeble-minded, would be further emphasised. present it would, however, perhaps be wise to confine our efforts to endeavouring to obtain an effective examination of the individuals themselves, lest our desire to look into their family histories should brand us as being too scientific for practical purposes!

The real practical question as to how to select the individuals who should be segregated—how actually to draw the line—has, it may truly be said, still been shirked in this discussion. This is no doubt true. But it must be remembered that in many similar cases in the practical affairs of life no rules indicating exactly where the line should be drawn can be laid down in words

even where the most vital decisions have to be made. true, for instance, in many respects in deciding whether or not a man is a lunatic, an idiot, or a criminal. The answer given to such questions must in reality always depend on the judgment of men merely guided by the knowledge of broad and general principles; and in drawing the line with regard to the segregation of the Feeble-Minded or of any other class of the eugenically unfit in the interests of posterity without laying down any hard and fast rules, it can merely be said that such a proceeding would form no exception to the methods generally adopted in such cases. Under an all-wise government these guiding principles might perhaps be such as would result in the net to catch the mentally defective being spread very widely. But it is quite certain that no existing democratic government would go as far as we Eugenists think right in the direction of limiting the liberty of the subject for the sake of the racial qualities of future generations. It is here that we find the practical limitation to the possibility of immediate reform; for it is unwise to endeavour to push legislation beyond the bounds set by public opinion because of the dangerous reaction which would probably result from neglecting to pay attention to the prejudices of the electorate. In existing social conditions the possibility of making progress in matters of wide interest is limited by the sentiments of the nation; and it follows that one of the first steps towards Eugenic reform must be the education of the public, an end to which our efforts should therefore now be directed.

Possibly there may be many who feel as regards the foregoing discussion that, even though the views we Eugenists hold may be sound enough, yet we have been traversing a region for the present, at all events, in reality far removed from the practical affairs of life. It is to be hoped that the introduction of a Bill into Parliament in the coming session, in which the segregation of the feeble-minded will be dealt with on Eugenic principles, will dispel this illusion. And, as regards what may be described as moral reform, the students of Eugenics soon find themselves face to face with problems of real life. For example, several doctors have told me that they have been consulted by

young men and women who wished to know whether their family histories were such as to make it right for them to abandon all thought of marriage. Many of the points which should be in the mind of the physician when advising a patient on this question have in fact already been discussed—points which he would do well to consider carefully in advance before he is actually faced with this serious problem. He is not likely to forget that any impediment in the way of marriage would be a serious evil to his patient not lightly to be suggested. He should remember that the population must be maintained, and for that reason alone that any check on marriage may be held to be objectionable. Again he must bear in mind that it would only be a person of high moral character who would think of abstaining from marriage on Eugenic grounds, and of all things high character is that most worth preserving in the coming generation. For all these reasons he would doubtless decide to suggest no objections to a marriage except in very clear cases. should, moreover, take into account the probability of the parties concerned, having any family; for the smaller that probability, the less would he be justified in introducing obstacles in the way of a happy married life merely on Eugenic considerations. broad principles as these would no doubt come readily enough to the mind of the physician studying this problem. If he goes beyond this point it is much to be feared that his path will be beset with many difficulties.

What are the heritable qualities, good or bad, to which most weight ought to be attached when the question of suitability for parenthood is being weighed in the scales? On what underlying principles ought the answer to this question to be based? Of the many difficulties which must be faced in any such enquiry it may be suggested that one of the most formidable is how to detect those indefinable qualities known as high and low character, and how to ensure that they shall be given their due weight in the scales. For the present we must content ourselves with dealing with the more obvious mental qualities. Passing on to physical defects, they should be regarded as being important in proportion to the amount of suffering they are likely to cause both to the individual actually afflicted and to his

relatives and friends; those diseases producing permanently injurious effects necessarily, therefore, being ranked as the most serious. The physician should, in fact, depart from his usual attitude of estimating the seriousness of an ailment by the probability of its producing fatal results. Lastly, such diseases as depend on the presence of microbes in the body are perhaps from the Eugenic point of view generally of less importance than those which are directly due to innate physical defects; because, even though the tendency to catch any infectious or contagious disease may be heritable, yet there is always a chance that in the future the race will be exempt from such a danger either by learning to avoid the microbe or by its extermination. An inherent liability to typhus fever would now, for example, hardly be felt to be in itself a serious evil; and consumption may conceivably in the future be struck out of the list of dreaded ailments. Judged by these standards, insanity is perhaps the worst of all diseases; whilst heritable deformity and the various forms of heritable chronic ailments appearing in youth, such as blindness and deafness, which completely incapacitate the sufferer from ordinary occupations, come next in the scale. A layman is perhaps, however, unwise in dogmatising on this subject, which is well worthy of further study by the medical Eugenist.

Granted that a general idea can be formed concerning the relative weight to be attached to all hereditary human qualities, good or bad, it would next be necessary to ascertain, as regards each prospective union, what would be the probability of these merits or defects reappearing in the offspring. When the family history of both parties is well known, the biometrician will doubtless before long be able to express in numbers the probability of the child of any marriage being afflicted with any heritable defect; that is to say, he could foretell the percentage of the children born of such marriages who would thus be afflicted. Then again, when the quality under consideration is known to follow the Mendelian law, our prophetic power will be very greatly increased. For example, if a defect is clearly dominant in the Mendelian sense, and if it can be proved to be absent in the case of both of the prospective parents, then their union need not be prohibited as regards any such ailment, however

frequently it may have appeared amongst their relatives. On the other hand, if the character is clearly recessive, then in certain cases the purely biometrical forecast would be rightly held to be too rosy. No doubt we are here dealing with a mass of vague and uncertain factors. No doubt much has yet to be learnt by the students of heredity. But the physician who studies all these points in connection with what is now known on these subjects will be in a far better position to give sound advice as to the probable results, and therefore as to the morality of any marriage, than one who merely trusts to his ordinary professional knowledge.

Eugenics may be divided into two branches, constructive Eugenics, or the endeavour to promote the multiplication of the more fit, and restrictive Eugenics, or the endeavour to diminish the numbers of the less fit. Thus far I have only dealt with restrictive Eugenics, and the clock tells me that I must not to-night attempt to deal with any other aspect of this subject. Had I had time, it would not have been difficult to prove that the study of constructive Eugenics also indicates the necessity of legislation in order to ensure the progress of the race. traversing this field of enquiry, it would, moreover, have been seen that the first steps towards Eugenic reform are the same as those the necessity for which I have already emphasised to-day. These are (1) further research in the science of heredity, and (2) the education of the public both in the elements of our science and as to the necessity for immediate action. We must prove to our countrymen that the fate of the nation of the future is largely in our own hands. Our duty to posterity is as real as our duty to our neighbours, and what we have to strive for is such a moral awakening as to at least ensure those sacrifices being now made which are necessary to safeguard us from national decadence. Our demands may be advocated on religious grounds; whilst, as regards our nation, we may safely assert that the patriotism of those who deliberately shut their eyes to the evils thrown on coming generations by our existing social system is shallow and delusive.